



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants: Raanan A. Miller, Erkinjon G. Nazarov, Angela Zapata, Cristina E. Davis, Gary A. Eiceman and Anthony D. Bashall

Application No.: 10/797,466

Group Art Unit:

Filed: March 10, 2004

Examiner: Not Yet Assigned

Confirmation No.:

Title: SYSTEMS FOR DIFFERENTIAL ION MOBILITY ANALYSIS

CERTIFICATE OF MAILING OR TRANSMISSION	
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<u>4/22/04</u> Date	<u>Rachel Meehan</u> Signature
<u>RACHEL MEEHAN</u> Typed or printed name of person signing certificate	

INFORMATION DISCLOSURE STATEMENT

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

This Information Disclosure Statement is submitted:

☐ under 37 CFR 1.129(a), or

(First/Second submission after Final Rejection)

☒ under 37 CFR 1.97(b), or

(Within any one of the following time periods: three months of filing national application (other than a CPA) or date of entry of the national stage in an international application; or before the mailing date of a first office action on the merits in a non-provisional application, including a CPA, or a Request for Continued Examination).

☐ under 37 CFR 1.97(c) together with either:

☐ a Statement under 37 CFR 1.97(e), as checked below, or

☐ a \$180.00 fee under 37 CFR 1.17(p), or

(After the 37 CFR 1.97(b) time period, but before final action or notice of allowance, whichever occurs first)

☐ under 37 CFR 1.97(d) together with:

☐ a Statement under 37 CFR 1.97(e), as checked below, and

☐ a \$180.00 fee under 37 CFR 1.17(p), or

(Filed after final action or notice of allowance, whichever occurs first, but on or before payment of the issue fee)

☐ under 37 CFR 1.97(i):

Applicant requests that the IDS and cited reference(s) be placed in the application filewrapper.

(Filed after payment of issue fee)

Statement Under 37 CFR 1.97(e)

- ☐ Each item of information contained in this Information Disclosure Statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this Information Disclosure Statement; or
- ☐ No item of information contained in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the undersigned, after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of this Information Disclosure Statement.

Statement Under 37 CFR 1.704(d) (Patent Term Adjustment)

Applies to original applications (other than design) filed on or after May 29, 2000

- ☐ Each item of information contained in the Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart application and this communication was not received by any individual designated in § 1.56(c) more than thirty days prior to the filing of the Information Disclosure Statement.
- ☒ Enclosed herewith is form PTO-1449:
 - ☒ Copies of the cited references are enclosed.
 - ☒ Since this application was filed after June 30, 2003, copies of issued U.S. patents and published U.S. applications are not required and are not being provided.
 - ☐ Copies of the cited references are enclosed except those entered in prior application, U.S. Application No. [], to which priority under 35 U.S.C. 120 is claimed. [The earlier application contains copies of the cited references.]
 - ☐ The listed references were cited in the enclosed International Search Report in a counterpart foreign application.
 - ☒ The "concise explanation" requirement (non-English references) for references AN2 & AS3 under 37 CFR 1.98(a)(3) is satisfied by:
 - ☒ the explanation provided on the attached sheet (for reference AS3).
 - ☐ the explanation provided in the Specification.
 - ☐ submission of the enclosed International Search Report.
 - ☐ submission of the enclosed English-language version of a foreign Search Report and/or foreign Office Action.
 - ☒ the enclosed English language abstract (for reference AN2).

☐ Applicant requests that the following non-published pending applications be considered:

Examiner's
Initials

_____ U.S. Patent Application No. [], by [inventor(s)], filed [], Docket No.: []

_____ U.S. Patent Application No. [], by [inventor(s)], filed [], Docket No.: []

_____ U.S. Patent Application No. [], by [inventor(s)], filed [], Docket No.: []

Examiner

Date

☐ A copy of each above-cited application, including the current claims, is enclosed.

☐ A copy of each above-cited application, including the current claims, is enclosed, except those entered in prior application, U.S. Application No. [], to which priority under 35 U.S.C. 120 is claimed.

The Examiner is requested to return a copy of the above list of pending applications indicating which references were considered with the next office communication.

It is requested that the information disclosed herein be made of record in this application.

Method of payment:

☐ A check for the fee noted above is enclosed, or the fee has been included in the check with the accompanying Reply. A copy of this Statement is enclosed.

☐ Please charge Deposit Account 08-0380 in the amount of \$[]. A copy of this Statement is enclosed.

☒ Please charge any deficiency in fees and credit any overpayment to Deposit Account 08-0380.

Respectfully submitted,

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Dated:

April 22, 2004

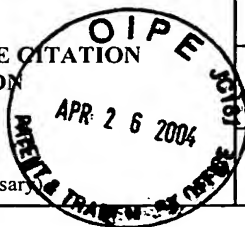
PTO-1449 REPRODUCED INFORMATION DISCLOSURE CITATION IN AN APPLICATION April 2, 2004 APR 26 2004 (Use separate sheets if necessary)	ATTORNEY DOCKET NO. 3239.1030-004		APPLICATION NO. 10/797,466	
	FIRST NAMED INVENTOR Raanan A. Miller		FILING DATE March 10, 2004	
	EXAMINER Not Yet Assigned		CONFIRMATION NO.	GROUP

U.S. PATENT DOCUMENTS

EXAM- INER INI- TIAL	REF. NO.	DOCUMENT NUMBER Number-Kind Code (if known)	ISSUE DATE / PUBLICATION DATE MM-DD-YYYY	NAME OF PATENTEE OR APPLICANT OF CITED DOCUMENT
	AA	6,495,823 B1	12-17-2002	Miller <i>et al.</i>
	AB	5,479,815	01-02-1996	White <i>et al.</i>
	AC	5,801,297	09-01-1998	Mifsud <i>et al.</i>
	AD	6,512,224 B1	01-28-2003	Miller <i>et al.</i>
	AE	6,180,414 B1	01-30-2001	Katzman
	AF	6,540,691 B1	04-01-2003	Phillips
	AG	5,508,204	04-16-1996	Norman
	AH	6,680,203 B2	01-20-2004	Dasseaux <i>et al.</i>
	AI	5,420,424	05-30-1995	Carnahan <i>et al.</i>
	AJ	5,455,417	10-03-1995	Sacristan
	AK	5,801,379	09-01-1998	Kouznetsov
	AA2	6,049,052	04-11-2000	Chutjian <i>et al.</i>
	AB2	6,323,482 B1	11-17-2001	Clemmer <i>et al.</i>
	AC2	6,504,149 B2	01-07-2003	Guevremont <i>et al.</i>
	AD2	US 2001/0030285 A1	10-18-2001	Miller <i>et al.</i>
	AE2	US 2003/0089847 A1	05-15-2003	Guevremont <i>et al.</i>
	AF2	US 2002/0134932 A1	09-26-2002	Guevremont <i>et al.</i>
	AG2	US 2002/0070338 A1	06-13-2002	Loboda

EXAMINER	DATE CONSIDERED
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FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER Country Code-Number-Kind Code (if known)	DATE MM-DD-YYYY	NAME OF PATENTEE OR APPLICANT OF CITED DOCUMENT	TRANSLATION	
					YES	NO
	AL	WO 00/08454	02-17-2000	National Research Council Canada		
	AM	WO 00/08456	02-17-2000	National Research Council Canada		
	AP	WO 00/08456	02-17-2000	National Research Council Canada		
	AO	WO 00/08457	02-17-2000	National Research Council Canada		
	AP	WO 01/69220 A2	09-20-2001	National Research Council Canada		
	AQ	WO 01/69647 A2	09-20-2001	National Research Council Canada		
	AL2	WO 01/08197 A1	02-01-2001	The Charles Stark Draper Laboratory, Inc.		
	AM2	WO 01/35441 A1	05-17-2001	The Charles Stark Draper Laboratory, Inc.		
	AN2	SU 1627984 A2	02-15-1991	Buryakov, Igor A., <i>et al.</i>		X

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OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

AR	Phillips, M., "Method for the Collection and Assay of Volatile Organic Compounds in Breath," <i>Analytical Biochemistry</i> , 247: 272-278 (1997).
AS	Basile, F., "A Gas Sample Pre-concentration Device Based on Solid Phase Microextraction (SPME) and Temperature Programmed Desorption (TPD)," <i>Instrumentation Sci. Tech.</i> , 31(2): 155-164 (2003).
AT	Phillips, M., "Breath tests in medicine," <i>Scientific American</i> , 267(1): 74-79 (1992).
AU	Shute, L.A., <i>et al.</i> , "Curie-point Pyrolysis Mass Spectrometry Applied to Characterization and Identification of Selected <i>Bacillus</i> Species," <i>J. Gen. Microbiol.</i> , 130(Part 2): 343-355 (1984).
AV	Wang, Z., <i>et al.</i> , "Mass Spectrometric Methods for Generation of Protein Mass Database Used for Bacterial Identification," <i>Analytical Chem.</i> , 74(13): 3174-3182 (2002).
AW	Demirev, P.A., <i>et al.</i> , "Microorganism Identification by Mass Spectrometry and Protein Database Searches," <i>Analytical Chem.</i> , 71(14): 2732-2738 (1999).
AX	Krishnamurthy, T., <i>et al.</i> , "Liquid Chromatography/Microspray Mass Spectrometry for Bacterial Investigations," <i>Rapid Commun. Mass Spectrom.</i> , 13: 39-49 (1999).
AY	Fox, A., <i>et al.</i> , "Determination of Carbohydrate Profiles of <i>Bacillus anthracis</i> and <i>Bacillus cereus</i> Including Identification of O-Methyl Methylpentoses Using Gas Chromatography-Mass Spectrometry," <i>J Clin. Microbiol.</i> , 31(4): 887-894 (1993).
AZ	Vaidyanathan, S., <i>et al.</i> , "Flow-Injection Electrospray Ionization Mass Spectrometry of Crude Cell Extracts for High-Throughput Bacterial Identification," <i>J. Am. Soc. Mass Spectrom.</i> , 13: 118-128 (2002).
AR2	Hathout, Y., <i>et al.</i> , "Identification of <i>Bacillus</i> Spores by Matrix-Assisted Laser Desorption Ionization-Mass Spectrometry," <i>Appl. Environ Microbiol.</i> , 65(10):4313-4319 (1999).
AS2	Demirev, P.A., <i>et al.</i> , "Tandem Mass Spectrometry of Intact Proteins for Characterization of Biomarkers From <i>Bacillus cereus</i> T Spores," <i>Analytical Chem.</i> , 73(23): 5725-5731 (2001).
AT2	Elhanany, E., <i>et al.</i> , "Detection of Specific <i>Bacillus anthracis</i> Spore Biomarkers by Matrix-Assisted Laser Desorption/Ionization Time-of-Flight Mass Spectrometry," <i>Rapid Commun. Mass Spectrom.</i> , 15(22): 2110-2116 (2001).

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OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

AU2	Mowry, C., <i>et al.</i> , "Rapid Detection of Bacteria with Miniaturized Pyrolysis-Gas Chromatographic Analysis," <i>Proc. of SPIE</i> , 475: 83-90 (2001).
AV2	Miller, R.A., <i>et al.</i> , "A MEMS Radio-Frequency Ion Mobility Spectrometer for Chemical Agent Detection," <i>Proceedings of the 2000 SolidState Sensors and Actuators Workshop</i> , (Hilton Head, SC: June 2000).
AW2	Riegner, D.E., <i>et al.</i> , "Qualitative Evaluation of Field Ion Spectrometry for Chemical Warfare Agent Detection," <i>Proceedings of the ASMS Conference on Mass Spectrometry and Allied Topics</i> , pp. 473A-473B (June, 1997).(1991).
AX2	Eiceman, G.A., <i>et al.</i> , "Miniature radio-frequency mobility analyzer as a gas chromatographic detector for oxygen-containing volatile organic compounds, pheromones, and other insect attractants," <i>J. Chromatography</i> , 917: 205-217 (2001).
AY2	Miller, R.A., <i>et al.</i> , "A MEMS radio-frequency ion mobility spectrometer for chemical vapor detection," <i>Sensors and Actuators</i> , A91: 301-12 (2001).
AZ2	Guevremont, R., and Purves, R.W., "High Field Asymmetric Waveform Ion Mobility Spectrometry-Mass Spectrometry: An Investigation of Leucine Enkephalin Ions Produced by Electrospray Ionization," <i>J. Am. Soc. Mass. Spectrom.</i> , 10: 492-501 (1999).
AR3	Handy, R., <i>et al.</i> , "Determination of nanomolar levels of perchlorate in water by ESI-FAIMS-MS," <i>J. Anal. At. Spectrom.</i> , 15: 907-911 (2000).
AS3	Verenchikov, A.N., <i>et al.</i> , "Analysis of Ionic Composition of Solutions Using an Ion Gas Analyzer," <i>Chemical Analysis of Environment</i> , edit. Prof. V.V Malakhov., (Novosibirsk, Nauka: 1991), pp. 127-133.
AT3	Guevremont, R., and Purves, R.W., "Atmospheric Pressure Ion Focusing in a High-Field Asymmetric Waveform Ion Mobility Spectrometer," <i>Review of Scientific Instruments</i> , 70(2): 1370-1383 (1999).

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